## Amendment to Claims

This listing of Claims will replace all prior versions and listings of claims in this Application.

**Listing of Claims**

Claim 1. (CURRENTLY AMENDED) A method of selective etching a metal oxide layer for fabrication of a ferroelectric device, comprising:

preparing a silicon substrate;

depositing a layer of metal thin film on the substrate;

patterning and selectively etching the metal thin film without substantially over etching into an adjacent oxide layer, including etching the metal thin film using BCl and Cl gas in an etching chamber, wherein the etching chamber pressure is maintained at a pressure of about 6 mtorr; and wherein BCl is delivered at a flow rate of about 30 sccm, and Cl is delivered at a flow rate of about 60 sccm;

depositing a layer of ferroelectric material;

depositing a top electrode on the ferroelectric material; and

completing the ferroelectric device.

Claim 2. (ORIGINAL) The method of claim 1 wherein said preparing includes forming an oxide layer on the silicon substrate.

Claim 3. (ORIGINAL) The method of claim 1 wherein said preparing includes forming a high-k oxide on the silicon substrate.

Claim 4. (ORIGINAL) The method of claim 1 wherein said depositing a layer of metal thin film on the substrate include depositing a layer of material taken from the group of material consisting of indium and indium oxide.

Claim 5. CANCELLED

Claim 6. CANCELLED

Claim 7. (CURRENTLY AMENDED) The method of claim ~~6~~ 1 wherein said patterning and selective etching the metal thin film further includes providing a Tcp RF of about 350 W at a Bias RF of about 150 W at a pressure of about 6 torr.

Claim 8. (ORIGINAL) The method of claim 1 wherein said patterning and selectively etching includes coating the metal thin film with photoresist; patterning the photoresist by photolithography; placing the patterned structure in an etching chamber; maintaining the chamber pressure in a range of between about 3 mtorr. to 15 mtorr; etching the exposed metal thin film with etching chemicals consisting of BCl, delivered at a flow rate of between about 10 sccm to 60 sccm, and Cl with a flow rate of between about 20 sccm to 100 sccm; and generating a Tcp RF plasma of about 350 W and a Bias RF plasma of about 150 W, while maintaining the backward plasma less than 1%.

Claim 9. (CURRENTLY AMENDED) A method of selective etching a metal oxide

layer for fabrication of a ferroelectric device, comprising:

preparing a silicon substrate;

depositing a layer of metal thin film on the substrate including depositing a layer of material taken from the group of material consisting of indium and indium oxide.;

patterning the metal thin film;

selectively etching the metal thin film without substantially over etching into an adjacent oxide layer including etching the metal thin film using BCl and Cl gas in an etching chamber, including providing a Tcp RF of about 350 W at a Bias RF of about 150 W at a pressure of about 6 torr.;

depositing a ferroelectric material;

depositing a top electrode; and

completing the ferroelectric device.

Claim 10. (ORIGINAL) The method of claim 9 wherein said preparing includes forming an oxide layer on the silicon substrate.

Claim 11. (ORIGINAL) The method of claim 10 wherein said forming an oxide layer includes forming a high-k oxide on the silicon substrate.

Claim 12. (CURRENTLY AMENDED) The method of claim 9 wherein the etching chamber pressure is maintained at a pressure of about 6 mtorr; and wherein BCl is delivered at a flow rate of about 30 sccm, and Cl is delivered at a flow rate of about 60 sccm, providing a gas

volume of Cl which is twice that of BCl.

Claim 13. CANCELLED

Claim 14. (ORIGINAL) The method of claim 9 wherein said patterning and selectively etching includes coating the metal thin film with photoresist; patterning the photoresist by photolithography; placing the patterned structure in an etching chamber; maintaining the chamber pressure in a range of between about 3 mtorr. to 15 mtorr; etching the exposed metal thin film with etching chemicals consisting of BCl, delivered at a flow rate of between about 10 sccm to 60 sccm, and Cl with a flow rate of between about 20 sccm to 100 sccm; and generating a Tcp RF plasma of about 350 W and a Bias RF plasma of about 150 W, while maintaining the backward plasma less than 1%.

Claim 15. (CURRENTLY AMENDED) A method of selective etching a metal oxide layer for fabrication of a ferroelectric device, comprising:

preparing a silicon substrate, including forming an oxide layer on the silicon substrate.;

depositing a layer of metal thin film on the substrate including depositing a layer of material taken from the group of material consisting of indium and indium oxide.;

patterning the metal thin film;

selectively etching the metal thin film without substantially over etching into an adjacent oxide layer ~~including etching the metal thin film using BCl and Cl gas in an etching~~

~~chamber~~ includes coating the metal thin film with photoresist; patterning the photoresist by photolithography; placing the patterned structure in an etching chamber; maintaining the chamber pressure in a range of between about 3 mtorr. to 15 mtorr; etching the exposed metal thin film with etching chemicals consisting of BCl, delivered at a flow rate of between about 10 sccm to 60 sccm, and Cl with a flow rate of between about 20 sccm to 100 sccm, wherein the volume of Cl is twice that of BCl; and generating a Tcp RF plasma of about 350 W and a Bias RF plasma of about 150 W, while maintaining the backward plasma less than 1%;

depositing a ferroelectric material;

depositing a top electrode; and

completing the ferroelectric device.

Claim 16. (ORIGINAL) The method of claim 15 wherein said forming an oxide layer includes forming a high-k oxide on the silicon substrate.

Claim 17. CANCELLED

Claim 18. (CURRENTLY AMENDED) The method of claim ~~17~~ 15 wherein the etching chamber pressure is maintained at a pressure of about 6 mtorr; and wherein BCl is delivered at a flow rate of about 30 sccm, and Cl is delivered at a flow rate of about 60 sccm.